REMARKS

This application has been carefully reviewed in light of the Office Action dated October 3, 2002 (Paper No. 3). Claims 1 to 13 are currently in the Office Action, of which Claims 1, 10 and 13 are the independent claims. Reconsideration and further examination are respectfully requested.

Claims 1 to 13 were rejected under 35 U.S.C. § 102(e) over U.S. Patent No. 5,841,898 (Liguori). Applicants have considered the Examiner's comments together with the applied reference and respectfully submit that the claims herein are patentably distinguishable over the applied reference for at least the following reasons.

The present invention concerns image processing in which color component images are rendered and converted for printing. According to the invention, a plurality of rendering sections are utilized to respectively render color component images on the basis of data common to the respective color components. In this manner, the rendering process is quicker than that of conventional systems that utilize a single rendering section to render color component images with successive rendering cycles for each of the respective color components.

With reference to particular claim language, independent Claims 1, 10 and 13 concern image processing in which color component images are rendered by a plurality of rendering sections, respectively, on the basis of data common to the respective color components. The rendered color component images are then converted into color images for printing in synchronism with operation of a printer engine.

The applied reference is not seen to disclose the foregoing features of the present invention. In particular, the applied reference is not seen to disclose at least the feature rendering color component images using a plurality of rendering sections.

Liguori concerns an image compositing system for composing an image from multiple objects. However, Liguori is not seen to disclose a plurality of rendering sections. Rather, Liguori is seen to disclose only a single band rendering subsystem, as shown in Figure 23. Therefore, Liguori is not seen to disclose at least the feature of rendering color component images using a plurality of rendering sections.

Accordingly, independent Claims 1, 10 and 13 are believed to be allowable over the applied reference. Reconsideration and withdrawal of the § 102(e) rejection of Claims 1, 10 and 13 are respectfully requested.

The other claims in the application are dependent from the independent claims discussed above and are believed to be allowable over the applied reference for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

In view of the foregoing amendment and remarks, the entire application is believed to be in condition for allowance and such action is respectfully requested at the Examiner's earliest convenience.

Applicants' undersigned attorney may be reached in our Costa Mesa, California, office by telephone at (714) 540-8700. All correspondence should be directed to our address given below.

Respectfully submitted,

Andrew D. Michels

Attorney for Applicants

Registration No. _50,957_

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-2200
Facsimile: (212) 218-2200

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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

1. (Amended) An image processing apparatus comprising:

a plurality of rendering [means for] <u>sections arranged to</u> respectively [rendering] <u>render</u> color component images on the basis of data common to the respective color components; and

[conversion means for converting] <u>a converter arranged to convert</u> the rendered color component images into color component images for printing in synchronism with operation of a printer engine.

2. (Amended) The apparatus according to Claim 1, wherein each of said plurality of rendering [means] <u>sections</u> comprises a memory having a memory capacity large enough to render at least a two-band color component image obtained by dividing a page into bands.

3. (Amended) The apparatus according to claim 2, wherein said memory is divided into areas in units of bands, and the divided areas are alternately used for the image rendering operation and outputting of an image to said [conversion means] <u>converter</u>.

4. (Amended) The apparatus according to claim 1, further comprising <u>a</u> rendering [control means for] <u>controller arranged to</u> respectively [supplying] <u>supply</u> the

common data to each of said plurality of rendering [means] <u>sections</u> at substantially the same time and [controlling] <u>to control</u> said <u>plurality of</u> rendering [means] <u>sections</u> to simultaneously render additive color mixture images.

5. (Amended) The apparatus according to claim 1, further comprising <u>an</u> output [means for] <u>section arranged to output</u> the color component images for printing to the printer engine in accordance with the operation of the printer engine.

6. (Amended) The apparatus according the clam 5, wherein said output [means] <u>section</u> comprises <u>a</u> delay [means for compensating for] <u>section arranged to compensate</u> timing differences in forming the respective color component images in the printer engine.

10. (Amended) An image processing method comprising the steps of:

rendering color component images <u>by operating a plurality of rendering sections, respectively,</u> on the basis of data common to the respective color components; and

converting the rendered color component images into color component images for printing in synchronism with operation of a printer engine.

12. (Amended) The method according to claim 11, further comprising the step of dividing [said] <u>the</u> memory into areas in units of bands, and alternately using the divided areas for [the] image rendering [operation] <u>in said rendering step</u> and outputting of

an image [to the] for conversion in said converting step.

13. (Amended) A computer program product [comprising] storing a computer-readable medium [storing] comprising program code for image processing, said product comprising process procedure codes for:

[code for] rendering color component images by operating a plurality of rendering sections, respectively, on the basis of data common to the respective color components; and

[code for] converting the rendered color component images into color components images for printing in synchronism with operation of a printer engine.